MAT-8196US

Appln. No.: 10/037,125

Amendment Dated: August 29, 2003 Reply to Office Action of: June 11, 2003

Amendments to the Claims: This listing of claims will replace all prior versions, and listings, of claims in the application

Listing of Claims:

1. (Currently Amended) A component mounting method for placing and soldering a component onto a board, said method comprising:

- (a) printing solder <u>on electrodes on the board</u> so as to shift and create a predetermined offset <u>of said solder</u> from a center position <u>of on</u> at least one of the electrodes formed on <u>athe</u> board, at a fixing position <u>said solder</u> for securing <u>a component terminal of said component when bonding a component terminal;</u>
- (b) placing the component after solder printing in such a way so that a placement position is shifted by said offset with respect to the center position of said electrode;
- (c) moving said component toward the center position of said electrode by heating said board to melt the solder after placing said component; and
- (d) securing said <u>component</u> terminal onto said electrode at said fixing position by solidifying the solder after moving the component.
- 2. (Original) The component mounting method as defined in Claim 1, wherein said offset is set to a value allowable between a position of said terminal and the center position of said electrode when placing the component in said step (b) by taking into account a self-alignment effect of melted solder while soldering of said electrode and said terminal; and movement in said step (c) occurs as a result of said self-alignment effect.
- 3. (Currently Amended) A component mounting method for placing and soldering components onto a board, said method comprising:
- (a) printing solder <u>on electrodes on the board</u> so as to shift and create a predetermined offset <u>of said solder</u> from a center line of at least one of a plurality of electrode lines, said electrode lines being <u>formed</u> in a parallel on the board, <u>at fixing positions</u> <u>said solder</u>

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for securing said components when bonding respective component terminals, and said center line linking center positions of a pair of electrodes configuring said one of electrode lines;

- (b) placing the component after solder printing in such a way so that a placement position is shifted by said offset with respect to the center line of said electrode line;
- (c) moving said component toward the center line of said electrode by heating the board to melt the solder after placing the component; and
- (d) securing said <u>component</u> terminal <u>onto said electrode at said fixing position at</u> the center line by solidifying the solder after moving the component.
- 4. (Original) The component mounting method as defined in Claim 3, wherein said offset is set to a value allowable between the position of said terminal and the center line of said electrode line when placing the component in said step (b) by taking into account a self-alignment effect of melted solder while soldering of said electrode and said terminal; and movement in said step (c) occurs as a result of said self-alignment effect.
- 5. (Original) The component mounting method as defined in Claim 4, wherein said plurality of electrode lines are disposed in three parallel lines.
- 6. (Original) The component mounting method as defined in Claim 5, wherein solder for a middle electrode line in said three electrode lines is printed matching a center line of said middle electrode line.
- 7. (Original) The component mounting method as defined in Claim 6, wherein solder for both outer electrode lines in said three electrode lines is printed at a position offset outward from a center line of each of said outer electrode lines.
- 8. (Original) The component mounting method as defined in Claim 4, wherein said plurality of electrode lines are disposed in four parallel lines.

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9. (Original) The component mounting method as defined in Claim 8, wherein solder is printed at a position offset outward from a center line of each electrode line in all of said four electrode lines.

- 10. (Currently Amended) A component mounting method for placing and soldering components onto a board, said method comprising:
- (a) printing solder <u>on electrodes on the board</u> so as to shift and create a predetermined offset <u>of said solder</u> from each center line of both outer electrode lines <u>in of</u> a plurality of electrode lines <u>formed in parallel</u> on said board <u>for each electrode in said both outer electrodes</u>;
- (b) placing said component after solder printing on said solder printed on each electrode in said outer electrode lines in such a way so that the placement position is shifted outward by said offset with respect to the center line of each electrode line;
- (c) moving said component toward the center line of respective electrode lines by heating the board to melt the solder after placing the component; and
- (d) securing said terminals of said component onto said electrodes by solidifying the solder.
- 11. (Original) The component mounting method as defined in Claim 10, wherein said offset is set taking into account a self-alignment effect of melted solder while soldering in a reflow process.
- 12. (Original) The component mounting method as defined in Claim 11, wherein said plurality of electrode lines are three parallel lines.
- 13. (Original) The component mounting method as defined in Claim 12, wherein solder is printed matching a center line of a middle electrode line in said three electrode lines.
 - 14. (Original) The component mounting method as defined in Claim 11, wherein said

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15. (Original) The component mounting method as defined in Claim 14, wherein solder is printed at a position offset outward from a center line of each electrode line in all of said four electrode lines.

16. (Original) The component mounting method as defined in Claim 15, wherein an offset set for two inner electrode lines in said four electrode lines is smaller than an offset set for two outer electrode lines.